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ABSTRACT

Job-related perceptions of medical technologists who had graduated from Illinois State University from 1972 through 1979 were surveyed. Of the 228 mailed questionnaires, 170 were returned. The questionnaire included items in which respondents judged the degree to which self-actualization characteristics were present in their jobs. An additional item was used to classify respondents as having either a high or low sense of accomplishment in their job. Of the medical technologists indicating a high sense of accomplishment, 70 percent indicated high career commitment; those with a low sense of accomplishment indicated both a high career commitment (40 percent) and a low career commitment (37 percent). Respondents with a high and low sense of accomplishment were also compared on their ratings of selected job characteristics. Characteristics rated highest by both groups were "job requires thinking" and "job entails variety." It appeared that career commitment was not transferred to commitment to present position, perhaps because the opportunities for advancement in present position are limited (for the group with a low sense of accomplishment) or salary in present position is inadequate. The findings of this study and other research provide some evidence of a relationship between certain personal needs and career commitment. (SW)

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CAREER COMMITMENT, SENSE OF ACCOMPLISHMENT, AND JOB SATISFACTION: A SURVEY OF MEDICAL TECHNOLOGISTS

by

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Career Commitment, Sense of Accomplishment,
and Job Satisfaction: A Survey
of Medical Technology Graduates

ABSTRACT

This study is a survey of the graduates of a medical technology program to assess their feelings about their jobs. Specifically, this study attempted to determine the relationship between a "sense of accomplishment" and "career commitment". Further, the relationship between job satisfaction in particular and sense of accomplishment was also studied. Analysis using Chi-square revealed a relationship between the respondent's sense of accomplishment and career commitment. Responses on accomplishment were then compared in terms of their ratings of selected job characteristics using a t-test. These findings are compatible with those of other studies on job satisfaction of medical technologists. That is, medical technologists are a group whose motivational factors tend to be instrinsic to the job and can be identified as achievement, recognition for achievement, the work itself, responsibility and growth or advancement. The findings of this study contain a number of implications for considering selected components related to job satisfaction in administrative practices.

INTRODUCTION

In the present economic climate, it is necessary for the medical technology profession to seek a better understanding of how medical technologists relate to their working conditions. With dwindling resources for postsecondary education and with the ever increasing cost of education in general, and clinical education in particular, there is a developing urgency to identify those job characteristics which promote an attitude of commitment to the profession. This study addresses selected components of this general problem. It is a survey of the graduates of a medical technology program to assess how they felt about their jobs. Specifically, this study attempted to determine the relationship between a sense of accomplishment on the job and career commitment. Further, the relationship between job satisfaction in particular and sense of accomplishment was studied.

BACKGROUND LITERATURE

Medline and ERIC searches were made for publications relating to medical technology job satisfaction. These articles were reviewed for applicability to this study, and ten were cited as part of the review of literature. The elements contributing to work satisfaction have been widely studied in industry, especially in blue collar workers; however, relatively few studies have examined job satisfaction in allied health professionals.[1]

A most extensive and relevant study regarding medical technologists was conducted by Jeswald in 1971. His study using Maslow's theory of needs hierarchy as a framework, determined that medical technologists attach the most

importance to satisfaction of needs for security and self-actualization, and the least importance to the needs of autonomy. The least satisfied needs across all categories of laboratory personnel were found to be self-actualization and esteem, while social needs were met in most cases. Laboratory personnel consistently expressed a lack of sufficient appreciation and recognition of good ideas and good work. Jeswald also found a relationship between satisfaction of certain needs and career commitment.[2]

The goal priorities of medical technologists from eleven clinical laboratories were examined by Gerstenfeld and Whitt[3] who found that good working conditions ranked first, followed by challenging work and high earnings. The high priority attached to challenging work corresponds with Jeswald's finding that medical technologists search for self-actualization on the job.

Matteson et al, used 259 laboratory personnel, 91 percent medical technologists, to measure the variables of eight dimensions adapted from the Halpin and Crofts Organization Climate Description Questionnaire. Their results suggest that:

> . . . the total satisfaction an employee derives from his or her job or organization is partly a function of how that job or organization meets certain characteristics of the total work environment.[4]

The data also suggested that higher order needs were the ones most strongly associated with satisfaction; yet the reported average level of current satisfaction of these needs was the lowest. The researchers reported some evidence that increasing the level of employee satisfaction is associated with needs such as self-actualization and autonomy. These findings are compatible with those of Jeswald who noted that medical technologists attach the most importance to satisfaction of needs for security and self-actualization.

To provide these involves creating an environment within employees' perceived opportunities to utilize their full range of talents, including exercising some degree of self-direction and control.

Love's study using 109 nonsupervisory medical technologists and a questionnaire designed to gather demographic information to measure various aspects of stratification, job satisfaction, and adaptiveness, reported the following. Medical technologists prefer supportive, well-structured environments that provide opportunities for them through participation, to maintain a degree of control over their work setting.[5] Further, the results agree with those of French and Rezler[1] which suggest that medical technologists prefer attention to detail, careful exactness, system, order, and concrete tasks.

French and Rezler's study was conducted on 154 female individuals to measure the personality characteristics of medical technologists by using the Myers Briggs Type Indicator (MBTI). Their data showed that medical technologists. functioning as laboratory personnel, were less satisfied with their work in general, with their co-workers, and with their opportunities for advancement than were medical technologists who were educators or administrators. All workers were least satisfied with promotion opportunities and pay received.[1]

J. Timothy McMahon, John M. Ivancevich, and Michael T. Matteson's study[6], "A Comparative Analysis of the Relationships Between Organizational Climate and Job Satisfaction of Medical Technologists," confirmed many of the findings of an earlier study,[4] the "Individual Need Satisfaction, Organization Practice, and Job Satisfaction Among Laboratory Professionals." The latter study examined the quality of the total workplace environment and organizational climate as a

correlate of six dimensions of job satisfaction from a sample of 344 medical technologists. The main focus of the study was on comparisons of administrators versus nonadministrators, hospital personnel versus non-hospital personnel, and men versus women. The findings suggest that the organizational climate dimensions of thrust, consideration, and esprit (espre') de corps have significant association with the need satisfaction of medical technologists. There was little evidence that the factors influencing global satisfaction for administrators were any different than for nonadministrators. Rather, the differences between the two groups, with respect to total satisfaction, appear to stem from the administrative group experiencing higher levels of self-actualization, esteem, and autonomy. This finding agrees with those of French and Rezler[1]. The data also indicated that relative satisfaction levels are lower among employees in smaller hospitals than in larger ones. Also, the correlation of job security with the organizational climate variables of thrust, consideration, esprit were higher for females than for males.

Richard E. Oliver noted in his study that: (1) Medical Technology and other health-related occupations are continuing to seek professional recognition. However, since these occupations were structured around the physician, professional standing has yet to be uniformly established, and (2) a medical technologist's interpersonal value system may, therefore, be quite instrumental in determining how satisfied he/she will be with the professional status associated with his/her position in the health care system.[8] He summarized his findings on medical technologist's interpersonal values and job satisfaction in this way:

> There are significant differences in the interpersonal value systems of medical technologists dichotomized in respect to their job satisfaction-dissatisfaction. Medical technologists

> who are satisfied with the rewards, helping relationships, and recognition their jobs provide for them value conformity. Medical technologists who are satisfied with the helping relationships and recognition their jobs provide for them value benevolence. Medical technologists who are dissatisfied with the helping relationships available to them value independence. Medical technologists who are dissatisfied with the recognition they receive from their jobs value recognition. These findings suggest that those medical technologists who value independence and recognition tend to be less satisfied.[8]

B.S. Georgopoulous and F.C. Mann found human relation skills, the ability to use pertinent knowledge and methods of working with or through people, to be of the utmost importance in contributing to job satisfaction in the clinical laboratory. They found that dissatisfaction is a result of the work providing fewer psychological rewards than those of other medical occupations which have more direct contact with the patient.[9]

SAMPLE AND METHODOLOGY

The subjects used in this study were graduates of the medical technology program at Illinois State University. The total population is composed of 228 graduates which represent all graduates of classes from 1972 through 1979.

The descriptive survey method of research was used to gather data and to describe the references of the medical technology graduates concerning particular items that refer to job satisfaction. The following procedure was used to obtain the data concerning the follow-up of the graduates: (1) a review of the literature was made concerning follow-up studies of medical technology graduates in doctoral dissertations, master's theses, books, periodicals, and journals; (2) selected relevant articles were reviewed, abstracted, and cited for applicability to this study; (3) a thirteen item, closed form questionnaire to gather data for the study was developed; (4) the

questionnaire was pre-tested by selected professors of medical technology at Illinois State University; (5) the instrument was revised incorporating the suggestions and recommendations of the professors; (6) the questionnaire was mailed to the participants; (7) a follow-up letter and telephone calls were addressed to participants who did not respond to the questionnaire, and (8) data were recorded, summarized, and analyzed.

Kidder[10], in discussing problems with self-reported satisfaction ratings, points out the tendency of persons to report high levels of satisfaction even when such reports are contrary to other objective evidence. Because of this, the job satisfaction questionnaire items were written to describe related job characteristics associated with self-actualization, and respondents were asked to make a judgment about the degree to which those characteristics were present in their jobs.

Item 8, "my job provides me with a sense of accomplishment," was used to classify respondents into two groups for the variable sense of accomplishment: (1) High -- those responding always or frequently true; and (2) low -- those responding somewhat, seldom, or never true. Item 13, "If I could start over, I would choose a different line of work," was used to classify respondents into three groups for the variable, career commitment: (1) Low -- those responding always or frequently true; (3) Average -- those responding somewhat true; and (3) High -- those responding seldom or never true.

RESULTS AND DISCUSSION

Of the 228 questionnaires mailed to the graduates, 170 or 74.6 percent was returned. Twenty-five percent was returned by the class of 1972, 60 percent by the class of 1973, 60 percent by the class of 1974, 96 percent by the class of 1975, 96 percent by the class of 1976, 68 percent by the

class of 1977, 72 percent by the class of 1978, and 63 percent by the class of 1979. Twelve, or 5 percent of the graduates did not indicate the year in which they graduated (Table I).

Analysis using Chi-square revealed a relationship between the respondent's sense of accomplishment and career commitment (Table II). Of the medical technologists indicating a high sense of accomplishment, 70 percent indicated high career commitment. On the other hand, of the medical technologists with a low sense of accomplishment, only 40 percent indicated a high career commitment while almost an equal number 37 percent, indicated low career commitment. Further, this relationship between sense of accomplishment on the job and career commitment holds when controlling for gender. Although the Chi-square for males is not significant, $p < .30$, this can be attributed to the small sample size for the males.

This relationship also holds when controlling for marital status, education, and full-time vs. part-time employment (Table II and III).

Respondents with high and low sense of accomplishment were then compared in terms of their ratings of selected job characteristics using a t-test. For each job characteristic listed, those respondents who expressed a greater sense of accomplishment rated the job characteristics significantly higher ($p > .01$) than respondents who expressed a lesser sense of accomplishment. Characteristics rated highest by both groups were "job requires thinking" and "job entails variety."

An interesting point demonstrated in Table IV is the difference in magnitude of the overall ratings for career commitment (mean = 3.57) and (1) commitment to present position (mean = 2.67), and (2) opportunities for advancement in present position (mean = 3.37), and (3) concern for a fair salary in present

position (mean = 2.8). What appears to be the case, is that the career commitment of the respondents is not transferred to commitment to present position perhaps because the opportunities for advancement in present position are limited (low group) or salary in present position is inadequate.

The finding in this study suggests that there is a relationship between a sense of accomplishment on the job and career commitment of medical technologists. This finding is compatible with those of other studies on job satisfaction of medical technologists. That is, the medical technologists are a group whose motivational factors tend to be intrinsic to the job and can be identified as achievement, recognition for achievement, the work itself, responsibility and growth or advancement.

These findings also agree with certain findings of other studies: (1) those of Gerstenfeld and Whitt, noting that having challenging work is a very important source of job satisfaction[3], and (2) those of Maslow's theory which note that intrinsic needs have to be met to produce job satisfaction. The results of this survey also agree with the finding of Love's[5] study which suggests that interpersonal values can have a significant influence on responsibilities an individual seeks and the amount of satisfaction he/she receives from his/her work in the field. Individuals who value leadership are more likely to be in supervisory positions, while those who value support and benevolence, are more likely to be in bench level or staff technologist positions.[5]

While further research is obviously needed, this study helps to increase the understanding of the attitudes of medical technologists, as well as understanding certain variables which contribute to satisfaction on the job. Such an understanding is important for effective management decisions regarding

laboratory personnel. The findings in this study contain a number of implications for considering selected components that are related to job satisfaction for good administrative practices for the following reasons: (1) It has been found by others[2] that there is a relationship between certain personal needs and career commitment; (2) There is considerable evidence that increasing the level of employee satisfaction is associated with needs such as self-actualization and autonomy. Also, the production dimension is related to satisfaction of social needs across all groups of laboratory personnel.[6] To respond to the needs related to job satisfaction involves creating an environment within an employee's perceived opportunities to utilize their full range of talents, including exercising some degree of self-actualization and control.

Finally, although the data showed a statistically significant relationship between a sense of accomplishment and career commitment of medical technologists, conclusions should be drawn cautiously because the sample consisted of graduates from a single educational institution.

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Table I

MEDICAL TECHNOLOGY GRADUATES BY YEARS AT ILLINOIS STATE UNIVERSITY

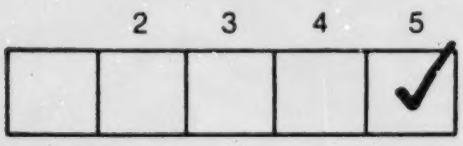
Years of Graduation	Number of Graduates	Number of Returns	Percent of Returns
1972	20	5	25
1973	20	12	60
1974	21	13	60
1975	24	23	96
1976	28	27	96
1977	38	26	68
1978	39	28	72
1979	38	24	63
		12*	
Total	228	170	74.6

*Graduates did not indicate their year of graduation.

For items 1-13 indicate your response by making a check mark in the square that best relates your opinion about each statement. The numbers associated with the five responses are:

5 = always true
4 = frequently true
3 = somewhat true
2 = seldom true
1 = never true

Example: My job provides self satisfaction



1. My job requires me to think.
2. My work entails variety.
3. I have opportunities to be involved when decisions are made in the laboratory
4. My job allows me to be creative.
5. I am encouraged to develop additional skills.
6. I have opportunities to develop new methodologies and procedures.
7. I am given enough responsibility for my present position.
8. My job provides me with a sense of accomplishment.
9. I am able to attend workshops, seminars, and lectures on employer's time and expense.
10. My job provides me with the opportunity to prepare for future advancement in the hospital.
11. I feel I am paid a fair salary commensurate with my educational background and ability.
12. I regard my present position as a lifetime career.
13. If I could start over, I would choose a different line of work.

Fig. 1. Questions in questionnaire mailed to graduates of Illinois State University.

Table II

RELATIONSHIP OF SENSE OF ACCOMPLISHMENT
ON JOB AND CAREER COMMITMENT

	Sense of Accomplishment on Job	Group Size Number	%	Career Commitment Low %	Average %	High %
	High	110	68	11	19	70
	Low	52	32	37	23	40
	Chi-Square = 17.5	Degrees of Freedom = 2				p < .001
When Gender is Controlled:						
Males	High	17	74	18	23	59
	Low	6	26	50	17	33
	Chi-Square = 2.43	Degrees of Freedom = 2				p < .3
Females	High	93	67	10	18	72
	Low	46	33	35	24	41
	Chi-Square = 16.0	Degrees of Freedom = 2				p < .001
When Marital Status is Controlled:						
Married	High	67	72	13	21	66
	Low	26	28	35	27	38
	Chi-Square = 7.03	Degrees of Freedom = 2				p < .03
Single	High	43	62	7	16	77
	Low	26	38	39	19	42
	Chi-Square = 11.6	Degrees of Freedom = 2				p < .01

Table III

RELATIONSHIP OF SENSE OF ACCOMPLISHMENT ON JOB AND CAREER COMMITMENT

	Sense of Accomplishment on Job	Group Size Number	%	Career Commitment Low %	Average %	High %
When Education is Controlled:						
B.S. Degree	**High**	80	68	9	19	72
	Low	37	32	30	19	51
	Chi-Square = 8.96	**Degrees of Freedom = 2**				**$p < .02$**
B.S. Degree +	**High**	30	67	17	20	63
	Low	15	33	53	33	13
	Chi-Square = 10.7	**Degrees of Freedom = 2**				**$p < .01$**
When Employment is Controlled:						
Full-time	**High**	87	65	7	22	71
	Low	46	35	37	17	46
	Chi-Square = 19.2	**Degrees of Freedom = 2**				**$p < .001$**
Part-time	**High**	23	79	26	9	65
	Low	6	21	33	67	0
	Chi-Square = 11.7	**Degrees of Freedom = 2**				**$p < .01$**

Table IV

MEAN RATINGS OF SELECTED JOB CHARACTERISTICS BY SENSE OF ACCOMPLISHMENT AND FOR TOTAL SAMPLE
(Standard Deviations are given in parentheses)

	Sense of Accomplishment		Total	
	High (N=109)	Low (N=53)	Sample (N=162)	t
Job Requires Thinking	**4.51** (.55)	**3.81** (.76)	**4.28** (.70)	**6.64** *
Job Entails Variety	**4.21** (.69)	**3.64** (.92)	**4.02** (.81)	**4.39** *
Job Entails Decision-making	**3.57** (1.02)	**3.11** (1.07)	**3.41** (1.06)	**2.63** *
Job Allows Creativity	**3.25** (.96)	**2.62** (.95)	**3.04** (1.00)	**3.92** *
Job Encourages the Development of New Skills	**3.81** (1.01)	**3.19** (1.09)	**3.60** (1.07)	**3.61** *
Job Provides for Opportunities to Prepare for Advancement	**3.89** (1.20)	**2.29** (1.22)	**3.37** (1.24)	**3.27** *
Job Provides a Fair Salary	**2.99** (1.22)	**2.43** (1.14)	**2.80** (1.22)	**2.79** *
Views Present Position as Life-time Career	**2.84** (1.19)	**2.32** (1.25)	**2.67** (1.23)	**2.59** *
Professional Commitment	**3.88** (1.01)	**2.94** (1.42)	**3.57** (1.24)	**4.82** *

* $p < .01$